

March 21, 2008

BIO-MICROBICS, INC.  
ALLISON BLODIG  
8450 COLE PKWY.  
SHAWNEE KS 66227

Re: Description: SEWAGE TREATMENT APPARATUS (also see SEWAGE TANKS)  
Manufacturer: BIO-MICROBICS, INC.  
Product Name: HighStrength FAST  
Model Number(s): 4.5  
Product File No: 20080178

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of AUGUST 2013.**

This approval is contingent upon compliance with the following stipulation(s):

- This product must be sized based on daily wastewater flow (gallons per day). The gallons per day value must be at least 150 gallons per day per bedroom.
- Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- This product must be installed in sewage treatment tanks approved by the Department of Commerce, Division of Safety and Buildings for use with this product.
- The maximum daily wastewater flow which may discharge through this product is 4500 gallons per day.
- This unit must be installed in a tank or tanks that comply with the following:
  1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 86-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 159-1/2 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 4219 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 1406 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 5625 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. This product shall be located inside of the tank and placed on foot extensions.
  9. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

10. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 45 inches.
  11. When this unit is installed in a two-compartment tank and the liquid level is less than 48 inches, the volume of the first compartment must be at least 1688 gallons.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 48 inches, the volume of the second compartment must be at least 5063 gallons.
  13. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  15. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.
  17. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 48 inches, the volume of the tank must be at least 5063 gallons.
  18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 48 inches, the volume of the upstream tank must be at least 1688 gallons.
  19. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 48 inches, the volume of the tank must be at least 6750 gallons.
- Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of Total Kjeldal Nitrogen (TKN) up to 70%.
  - When this product receives wastewater from commercial or residential applications, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L.
  - Any plan submitted to the department for a commercial system that includes a HighStrengthFAST® unit shall be accompanied by a letter from Bio-Microbics, Inc. assuring the design will meet required effluent quality.
  - When dosing HighStrengthFAST ® units, a dosing schedule that delivers a maximum 1/24th (4.167%) of the design flow rate for the unit in any one hour period is suggested. This schedule also applies to any fraction of an hour.

This approval supersedes the approval issued on 12/7/2007 under product file number 20070537. This approval letter shall be incorporated with your previously approved plans and/or specifications approved under product file number 20070537.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Jean M. MacCubbin, CST  
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